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Adviser Supplement  
**Inventors and Scientists**  
*Tar Heel Junior Historian*, Fall 2006

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# Lesson Plan: Building Blocks of Invention

Grade: 4–12

Overview: The stories that students will read about prominent North Carolina inventors will reveal that there can be many factors that lead to their inventions. These include personal experiences, educational opportunities, and the ability to build on the work of others.

Purpose: Students will better understand the process of inventing and the elements required for significant inventions to come to fruition.

Time: One class period

Objectives: Social Studies, Grade 4: 3.02, 7.04  
Social Studies, Grade 8: 5.04  
Social Studies Skills, K–12: 1.02, 1.03, 1.04, 4.06

Materials: Fall 2006 *Tar Heel Junior Historian* articles:  
“The Man Who Helped the World Breathe Easier,” by Lindsey Hinds-Brown  
“A Life-saving Team: Gertrude Elion and Dr. George Hitchings,” by Lisa Coston Hall  
“John Blue, Inventor,” by Sara M. Stewart  
“The House That Harriet Built,” by Kathy Neill Herran  
Building Blocks of Invention Activity Sheet, one per student or group  
Scissors  
Glue or paste  
Markers or pens

- Procedure:
1. Begin by having students read one of the articles as a class (the “A Life-saving Team: Gertrude Elion and Dr. George Hitchings” article is a good starting piece, as it includes many of the important building block elements). Ask students to describe the process that led to the pair’s research work and discovery. You may also want to discuss the challenges that are faced on the road to important inventions.
  2. Provide the “Building Blocks” worksheet and another inventor article to a pair or group of students. Tell them to read the article and determine a list of “blocks” that led to the discovery or invention.
    - For younger students, you may want to include categories on the blocks, such as education, personal experiences, and other research.

3. Students should cut out the blocks and then write the individual elements on each block. As a group, they can decide which are the foundation and middle blocks, leading to the invention or discovery block at the top of the pyramid. Have them glue the blocks onto a separate piece of paper in the pattern that they have decided best reflects the discovery process for the article that they read.
  - For older students, you may want to have them think about the fact that the North Carolina invention or discovery they read about may not be at the top of the pyramid. For instance, the work of Gertrude Elion can be considered to be in the middle tier, with the discovery of AZT as an important discovery built on her work. Challenge students to think about where the discoveries of these North Carolina examples have led for others across the nation and world.
4. Groups can present their Building Blocks of Invention to the class and describe the work of the inventor or scientist that they discovered in the magazine.
5. Conclude by discussing as a class the similarities and differences between the blocks presented by each group.

**Extension Activity:**

1. Students can research other important inventions and go through a similar process of creating building blocks to describe the process and impact of those inventions.

## Activity Sheet: Building Blocks of Invention

A diagram consisting of six empty rectangular boxes arranged in a pyramid shape. The top row has one box. The middle row has two boxes. The bottom row has three boxes. All boxes are of the same size and are intended for students to write or draw in.

# Lesson Plan: Inventor Trading Cards

Grade: 4–8

Overview: Trading cards have been used for decades as a source of entertainment, marketing, and information exchange. Dating back to the 1800s, cartes de visite were used to capitalize on the new medium of photography. As they complete this activity, students will probably think of sports, movie, or game collectible trading cards that they are familiar with.

Purpose: Students will research North Carolina inventors and scientists and create sets of cards that include descriptions of the importance of their discoveries, as well as biographical information.

Time: One class period

Objectives: Social Studies, Grade 4: 3.02, 4.05, 7.02  
Social Studies, Grade 8: 5.04  
Social Studies Skills, K–12: 1.02, 2.05, 2.06

Materials: Fall 2006 *Tar Heel Junior Historian* magazine  
Inventor Trading Cards Activity Sheet (as transparency or handout)  
Index cards  
Pens, pencils, markers  
Optional: Internet or library access for additional research

- Procedure:
1. Begin by discussing the use of trading cards. Students will probably be familiar with trading cards. Have them list typical card features, such as art and graphics, important information about the person or character, statistics, and so forth.
  2. Review with students the template suggestion for the trading cards on the activity sheet. Explain that they will be responsible for researching an important North Carolina invention or inventor (cards can be created for either the person or for the invention itself) using the *Tar Heel Junior Historian* magazine. Each student can create multiple cards to build a complete set, or you can divide the class and have each student create multiple copies of a single card that they can later trade with classmates.
  3. After the students have read the appropriate articles, supply them with materials to create their trading cards. (Note: Although index cards work best, an alternative is to cut sheets

of paper of a suitable size.) You may want to have a draft step in between, to review the information the students have selected for their cards. Reinforce the importance of students analyzing the contributions or importance of these inventors or inventions, as this should be a key component of the card.

- As many students will know from trading commercial card sets, cards often have values, making some more desirable than others. To extend the analysis of the important contributions made in North Carolina, students could rank the inventions they have learned about based on value and decide on a scheme for the cards that will make certain cards more “valuable” in the trading set (using a certain color or symbol, making fewer of the most important, special graphics, and so forth).
4. Conclude the activity by having students trade their cards with others. Discuss what information they find on the cards that their classmates have made.

## Activity Sheet: Inventor Trading Cards

*What makes the front of cards unique?*



**CARD FRONT:**  
Create a drawing or symbol that shows the invention or inventor. The artwork should tell you something about the card.

**CARD BACK:**  
Include important information, such as:

- Name
- Date
- Invention description
- Impact of invention or inventor
- Brief biographical information for inventor



*What is most important about the inventor or invention on this card?*

# Lesson Plan: Inventors Hall of Fame

Grade: 4–12

**Overview:** Each year inventors across the country are chosen for the National Inventors Hall of Fame, spotlighted on the Web site [www.invent.org](http://www.invent.org). There is a nomination process, and a committee makes selections based on the merit of the inventions. Some of the inventors highlighted in the fall 2006 issue of *Tar Heel Junior Historian* are already in the National Inventors Hall of Fame, but this activity will give students the chance to make their own nominations and form a selection committee for a North Carolina Inventors Hall of Fame.

**Purpose:** Students will evaluate the impact of the North Carolina inventions featured in the fall 2006 *Tar Heel Junior Historian* magazine and vote on significant achievements.

**Time:** One class period, plus additional research time as needed

**Objectives:** Social Studies, Grade 4: 3.02, 4.05, 7.02, 7.03  
Social Studies, Grade 8: 5.01, 5.04, 7.03, 8.02  
Social Studies Skills, K–12: 1.02, 1.03, 4.03, 4.06

**Materials:** Fall 2006 *Tar Heel Junior Historian* magazine  
Nomination Form Activity Sheet, one per student or group  
Optional: Internet or library access for additional research

**Procedure:**

1. You can begin by sharing the real Hall of Fame with students and asking them to discuss what they think should qualify someone to be in it. Discussion questions can include:
  - Which is more important, how useful an invention is at the time of its creation or its lasting impact?
  - Which is more important, one inventor with many good ideas or an inventor with one great idea?
  - Is the impact of the invention based on how many people use it or on how it revolutionizes the way something is done?
  - Since your nomination will be for the North Carolina Inventors Hall of Fame, should the impact of the invention on the state be more important than its general use or impact?
2. There are a variety of ways that you can organize student nomination forms, depending on time constraints and other exercises already completed, including:



- Students can research several different inventors throughout the magazine and decide whom they should nominate based on merit.
  - You can assign particular people to students and tell them that the strength of the nomination and the inventor's chances of getting into the Hall of Fame are based on their research and the persuasion in their nomination form.
  - After individuals review the articles, they can form groups and decide which person they should write the nomination for to submit to the selection committee.
3. Students can form selection committees and review the nomination forms to choose the candidate that should go into the North Carolina Inventors Hall of Fame. After they select their candidate, they should write a short statement about how they decided on that selection.
  4. Conclude by announcing the winners and having the students discuss their Hall of Fame inductees.

## Activity Sheet: Inventors Hall of Fame Nomination Form

**The selection committee will use this form to decide who should be inducted into the North Carolina Inventors Hall of Fame. Your impact statement should be persuasive for the judges—try your best to get the candidate inducted!**

**Name:** \_\_\_\_\_

**Key Inventions:** \_\_\_\_\_

### Brief Biographical Information:

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**Invention Impact Statement:** (Why is the invention or the work of the inventor important enough for him or her to be inducted into the Hall of Fame?)

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

# Lesson Plan: Inventions through Time

Grade: 4–8

Overview: Students will chart the inventions and innovations in the fall 2006 issue of *Tar Heel Junior Historian* in order to better understand their historic context.

Purpose: The innovations that are showcased in this magazine happened in a variety of eras and fields. This project will provide students with a chance to consider them in their own eras and better understand their impacts on the state.

Time: One class period, plus additional research time

Objectives: Social Studies, Grade 4: 1.04, 3.02, 4.05, 7.01, 7.02  
Social Studies, Grade 8: 5.01, 5.04, 8.02  
Social Studies Skills, K–12: 1.02, 1.04, 1.08, 2.05, 2.06

Materials: Fall 2006 *Tar Heel Junior Historian* magazine  
Roll of kraft paper  
Markers  
Rulers  
Research resource materials, such as textbooks, Internet, or library  
Optional: collage materials

Procedure:

1. Students can be divided into groups according to time periods: early to mid-1800s, late 1800s, early to mid-1900s, and late 1900s through today. Have them review the articles to determine which inventions fit into their time period. Alternatively, students can make individual time lines.
2. After they read the appropriate article(s), ask students to research other important events in North Carolina and the country (for older students) that happened during the same time period, including other discoveries, political events, and social events.
3. Place the roll of kraft paper at a central place and make a time line down the center. On one side of the line, have students add the inventions that they have just read about. On the other side of the line, have them list the North Carolina events (if students have also researched national events, you can integrate the state and national events but may want to color code them). Students can add appropriate images using collage materials or drawings that illustrate the inventions or events. Depending on

time constraints, they can also research other inventions of their time period.

4. As a class, look at the time line and discuss how the inventions relate to other events that were occurring at the same time and, potentially, how they impacted future events. (For example, how did the first radio broadcast influence communication in the next few decades?) Also discuss how North Carolina changed over each time period and what role the students think the inventions might have played in these changes.
5. Conclude by asking students to select one time period that they are interested in and having them write or draw a description of why a particular invention was important for that time.

# Lesson Plan: The Idea That Changed the School

Grade: 4–12

Overview: As students will have seen through the examples of invention detailed in the magazine, inventions often arise from everyday dilemmas and needs that people encounter on a personal basis. This activity will allow them to follow that example in a relevant setting they encounter regularly: their school.

Purpose: Students will use the examples of inventiveness in the fall 2006 *Tar Heel Junior Historian* magazine to brainstorm ideas for their own invention for today.

Time: One class period

Objectives: Social Studies, Grade 4: 1.04, 3.02, 7.05  
Social Studies, Grade 8: 5.04, 7.03  
Social Studies Skills, K–12: 1.02, 1.03, 2.06

Materials: Fall 2006 *Tar Heel Junior Historian* article:  
“The Box That Changed the World,” by Dr. Tom Hanchett  
Blank paper for group brainstorming  
Markers  
Optional extension: materials for building models

Procedure:

1. Have students read “The Box That Changed the World,” by Dr. Tom Hanchett. This article discusses how a relatively simple idea changed the way we transport goods around the globe. Discuss with students other examples of innovation that they have become familiar with through their reading of the fall 2006 *Tar Heel Junior Historian* magazine and how innovations often come in response to daily dilemmas.
2. Have students generate a list, as a class or individually, of design dilemmas they face every day at school. These might include ways to carry books, redesign desks, eat in the cafeteria, and so forth. Tell them they have the chance to help make their school day better through a design contest called “Change the School.”
3. Through discussion, decide which problem the class will use to be the basis for their invention. In groups, students should brainstorm potential solutions to their design dilemma. Once they have agreed on a solution, they can sketch their invention

on the paper. As an extension, they can create models or mock-ups of their design.

4. Groups can present their solutions to the class, sharing how their invention helps “Change the School.” Ask students to explain how they arrived at their invention and if they had other ideas that they decided not to pursue. If so, why was the sketched invention selected?
5. After all the designs have been presented, have students individually select which invention they think would be the best solution and explain why in a writing assignment. (Note: This part of the activity is designed to practice evaluation and writing skills, not to truly vote on a winner, as every potential solution will have its own merits.)
6. Conclude with a discussion comparing and contrasting the students’ invention process with the ones that they have read about.

# Education Resources for Inventors and Scientists

## Web Sites

### **Enchanted Learning**

[www.enchantedlearning.com/inventors.com](http://www.enchantedlearning.com/inventors.com)

This Web page contains a huge database of inventors and inventions. The content can be accessed by time period, theme, or alphabetically.

### **National Inventors Hall of Fame**

[www.invent.org](http://www.invent.org)

This Web site is the home of the National Inventors Hall of Fame, and it includes a searchable list of the Hall of Fame members, patent information, and links to induction information.

### **Invent Now**

<http://www.inventnow.org/InventNowKids/>

This site, developed by the National Inventors Hall of Fame and the U.S. Patent and Trademark Office, contains invention contests for kids, as well as teacher and parent resources.

### **Lemelson Center for the Study of Invention & Innovation**

<http://invention.smithsonian.org/home/>

This Smithsonian Institution Web site includes stories behind inventions, educational materials, archives, oral histories, and more.

### **Beyond Discovery**

[www.beyonddiscovery.org](http://www.beyonddiscovery.org)

A Web site from the National Academy of Sciences that features information on the latest technologies and advances in science. Includes a useful time line feature dating back to BC discoveries!

### **Smithsonian Institution's Inventors and Innovations**

<http://www.si.edu/resource/faq/nmah/invent.htm>

This page includes links to information on inventors and innovations from across American history, including special information devoted to women and African American inventors.

## Field Trip Ideas

### **John Blue House**

Location: 3040 X-Way Road, Laurinburg

Open: Monday–Saturday, 10:00 a.m.–noon and 1:00–4:00 p.m.

Phone: 910-276-7238 or 910-277-7860

Visit a restored and operational pre-Civil War cotton gin, authentic log cabins, and the newly acquired Cotton Blossom Railroad, as well as the historic house.

### **North Carolina Museum of History**

Location: 5 East Edenton Street, Raleigh

Open: Tuesday–Saturday, 9:00 a.m.–5:00 p.m.; and Sunday, noon–5:00 p.m.

Free admission.

Phone: 919-807-7900

Web site: <http://ncmuseumofhistory.org>

Numerous exhibits align with the state social studies curriculum. *From Horses to Horsepower* emphasizes the history of North Carolina's transportation, for example, and *From the Museum's Attic* displays artifacts of various groups moving into North Carolina. The lobby boasts the Bensen B-8M Gyrocopter and a reproduction of the Wright brothers' plane.

### **North Carolina Museum of Natural Sciences**

Location: 11 West Jones Street, Raleigh

Open: Monday–Saturday, 9:00 a.m.–5:00 p.m.

Phone: 919-733-7450

Web site: [www.naturalsciences.org](http://www.naturalsciences.org)

Explore the largest natural history museum in the Southeast and see how the work of the Brimley brothers continues to engage visitors today. The Web site offers comprehensive planning materials and resources for teachers.

### **North Carolina Transportation Museum**

Location: 411 South Salisbury Avenue, Spencer

Open: Monday–Saturday, 9:00 a.m.–5:00 p.m.

Phone: 704-636-2889

Web site: [www.nctrans.org](http://www.nctrans.org)

Explore exhibits of antique locomotives, rail cars, automobiles, and more. Take a train ride around the museum's historic fifty-seven-acre site. The museum also now houses *The Box That Changed the World* exhibit, featured in this issue of *Tar Heel Junior Historian*.

### **Mount Mitchell State Park**

Location: 2388 State Highway 128, Burnsville

Open: November–February, 8:00 a.m.–6:00 p.m.; March and October, 8:00 a.m.–7:00 p.m.; April and September, 8:00 a.m.–8:00 p.m.; May–August, 8:00 a.m.–9:00 p.m. (closed Christmas Day).

Phone: 828-675-4611

Web site: <http://www.ils.unc.edu/parkproject/visit/momi/home.html>

In 1835 Dr. Elisha Mitchell, a science professor at the University of North Carolina, made an excursion to the area to measure the mountain elevations. Through the use of barometric pressure readings and mathematical formulas, Mitchell figured the highest elevation of the range to be 6,476 feet, higher than that of Grandfather Mountain. In honor of his work, the highest peak in the Black



Mountain Range was given his name in 1858. In 1915 a bill was introduced in the state legislature establishing Mount Mitchell as the first state park.

### **Wright Brothers National Memorial**

Location: 1401 National Park Drive, Manteo

Open: summer, 9:00 a.m.–6:00 p.m.; and rest of the year, 9:00 a.m.–5:00 p.m.

Admission: \$3 per person

Phone: 252-441-7430

Web site: [www.nps.gov/wrbr/](http://www.nps.gov/wrbr/)

Visit the site of the first successful powered airplane flights.

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## **Additional Material**

### **Oral History Primary Source: Interviews on the Fiftieth Anniversary of the Rural Electrification Administration**

Legendary United States inventor Thomas Alva Edison patented the electric lamp in 1880, but it took time for electric lights in homes to become commonplace. By the 1930s, nearly 90 percent of urban dwellers in the United States had at least some electricity. In rural areas, where utility companies said it cost too much to string power lines to individual homes, things were much different. Under President Franklin Roosevelt, the Rural Electrification Administration (REA) was established in 1935 to bring electricity to more Americans, improve their standard of living, and boost the family farm.

By some estimates, about 3 percent of North Carolina farms had electricity in 1935. REA—along with similar state and local efforts—helped rural residents create electric cooperatives that began to build power lines. Cooperatives are organizations owned by and operated for those using their services. By 1940, about a fourth of North Carolina farms had electricity, and the number continued to increase. Families could buy electric water pumps, lights, fences, milking machines, and other equipment for their farms. They could start to add appliances such as refrigerators, irons, and electric stoves to their homes. Electric radios replaced smaller battery-operated ones. People began staying up later to read or sew. Televisions and telephones began to come along.

At first, some people worried about electricity being dangerous or “leaking” from sockets with no bulbs in them. The expense kept some families from getting electricity.

Imagine living on a farm that got electricity in the 1940s. What else would be going on? How might electricity change life for better or worse? What might become more efficient? What would be different from life in 2006?

Between June 1984 and May 1985, to observe REA’s fiftieth anniversary, the North Carolina Association of Electric Cooperatives sent interviewers to the homes of more than forty residents across the state, to ask them about the differences that electricity had made in their lives. The following are excerpts from some of those interviews. What can we learn from oral history? What precautions should one observe when reading oral history transcripts?

*Interviews from D Series, Southern Oral History Program Collection (#4007), Southern Historical Collection, Wilson Library, University of North Carolina at Chapel Hill.*

**David Bateman, of Tyner**

*Born in 1938. Age nine when electricity came to his family's farm.*

Mr. Bateman says that electricity made farming more efficient and made cooking, washing clothes, and curing tobacco much easier. He remembers staying up later to listen to the radio.

The main thing he recalls is "the brightness of the light. We are so accustomed to the lights and electrical conveniences now we don't pay that much attention to it. But when you have been used to a kerosene lamp and you could put one 60-watt lightbulb in the center of the room and it just looked like it lit the whole place up so brightly. It seems like this day with a 60-watt bulb it's not nearly that light . . . But the dimness of a kerosene lamp as compared with an electric bulb, that was one of the most striking things to me."

Is life better now, or was it better back then?

"Well, I think we've had several tradeoffs. When some people refer to the good old days, I think they're talking about when people had time to visit or felt like they had time to visit. People were more dependent on one another in the neighborhood at that time than they are now. With the coming of electricity everybody is sort of self-sufficient so far as around the house, especially with the coming of television. I think the good old days was when people had the opportunity to just sit around and chew the fat and socialize and enjoy one another. I think much of that has been lost through modern technology."

**Lena Boyce, of Rehobeth**

*Age eighty-three. Thinks her family got electricity in the early 1940s.*

She remembers that REA would wire houses, and sometimes families waited a while for the current to be cut on. She remembers people cutting down trees to put in power lines. Her husband bought an electric radio from Sears and Roebuck through the mail. It arrived hours before their electricity was turned on. One of the first things they bought was a refrigerator, and she thinks they bought an iron not too long after. The radio distracted her children, ages eight and fifteen, from their homework at first, but the electric lights helped them.

That night when the lights were turned on, "I won't ever forget that. We turned it on in the kitchen, we were in the kitchen getting ready to eat supper (they'd finished up out here, turning the current on), and Mr. Boyce came in and put the light on to eat supper by. And my kitchen walls looked so dirty! I just couldn't believe it. The lights were so bright, so much brighter than what we'd ever had in there before. During the day we had sunshine and all that, but yet it didn't come in the house like the electric light did."

One of the biggest changes was in the way she had to wash clothes.

"[Before electricity] we had a big tub and a big iron pot. You put it out on the woodpile and make you a big fire and heat your water, scrub your clothes on scrub boards, then put them in the pot of hot water. You'd put soap, a lot of people used box lye in there to make clothes white and get them clean. It was almost a day's work if you had several children. You felt like resting a while when you finished your washing. . . . Well, it was a great relief from that washing after I got a washing machine. That was a great relief. Yes, it helps in so many ways. Now, I feel like I just couldn't make out. When the current goes off for a little while, I can't hardly wait for it to come back on [laughter]. . . . The lights really did mean so much. To think that you could just flip the switch and you've got all the lights you want. You don't have to trim any more greasy, oily wicks. You don't have to wash any more sooty globes for your lamps."

**Shirley Collier, of Fayetteville**

*Born in 1939. Believes that she got electricity when she was six or seven years old.*

She remembers having to heat heavy irons on the stove before electricity, as well as trying to do homework without it.

"Before, we had the lamp, and you can imagine with six, seven kids trying to crowd around a lamp to see, or else, we did like Abe Lincoln—we sit in front of the fireplace and did our homework. And after there was a big, whole room full of light. You could sit anywhere you wanted

to. You could see just as well in one place as you could the other. I think it made a lot of difference.”

**H. E. Daughtry, of the Old Neck community (Perquimans County)**

*Born in 1906. Got electricity in about 1947, when he was teaching school.*

Did electricity change your school?

“We did have electric fans in school and we did have—well, very sparsely—electric typewriters. . . . Prior to electricity the children were eating and carrying what they call brown bags. And after electricity we had lunchrooms. There you had to have electricity to use that warmer for the oven to keep food, and then, of course, other electrical gadgets such as can openers and what have you.”

Another big change was in food storage. Before electricity, some families had ventilated “milk houses” built outside where they could keep butter, milk, and other things that could spoil.

The coming of electricity seemed to decrease the time that local people spent visiting with one another or going out.

“The television—you see, almost everyone now has a television. When you had your television, you stayed home because prior to the television and radio my wife and I used to go to the movies. When we got the television, I don’t think we’ve been to the movies a half a dozen times because we have a movie right here in the home. And almost any program on any situation.”

**Fredda Davis, of the Nathan’s Creek community (Ashe County)**

*Born in 1912. Not sure when electricity came.*

The electric items that she most remembers people getting were milk machines, electric water pumps, and stoves. She also remembers going to extension homemakers programs about electricity, electrical appliances, and using both safely.

“Before we had electric lights in the church—and you’d go and snap on a switch and go to your pew and sit down—back in those days you had little shelves up on the wall and they had lanterns that the first one who’d come to church when we were having night services would go around and light all them lanterns and set them on those shelves so you’d have light and have church.”

**Mrs. W. D. Elliott, of Tyner**

*Born in 1911. She recalls that her family got electricity in 1946.*

“That vacuum cleaner was one blessing. Among other things, I am allergic to excessive house dust. And that was blessing to have a vacuum, because with a broom you stirred up the dust. And when you go over with a dust cloth, you don’t get all the dust. But with a vacuum cleaner, if you use it right, it isn’t necessary to dust but every so often.”

She had to make sure that her children did their homework before they turned on the radio and, later, the television.

“It seemed those that were born after we had electricity just took it for granted, just like the wind blowing. It was here when they came and they just took it for granted, didn’t know what it was to be without it except occasionally when we had an outage, but that was soon remedied. But older people—especially those old enough to have lived through the Great Depression (when our motto was, ‘use it up, wear it out, make it do or do without’), we learned how to make things do and how to patch ‘em up. As far as buying appliances now, in ‘46 it wasn’t a question of whether you could pay for one, it was if you could be supplied. We had an order in, my sister and I both, at more than one place before we ever got a washer. I suppose the war effort caused a scarcity of appliances and there was such a great demand for them.”

She can remember the first day of having electricity.

“I know the two older girls—one was eleven, one nine—they would go from room to room snapping the light on and off, on and off. And it seems to me they thought it was magic to stand in the lower hall and turn on the light in the upper hall. That was one of the things. That soon got old

to them though. That was in the first few days. They seemed to think it was so nice there was a switch just above the head of the bed. They didn't have to blow the light out before they went to bed. They'd go to bed then turn the light out. And if they wanted to, they could read in bed."

She was happy that her ironing and washing became a little easier to do, so she had some time to read. Electricity also changed the family's Christmas gifts. They started getting things like radios and irons for Christmas, "but later on it was electric blankets and hair dryers and electric curlers," tape players, and razors.

### **John Godwin, of Pembroke**

*Age sixty-nine. Was about twenty-one years old when his family got electricity.*

The biggest development he remembers was getting a radio. He thinks the first month's electric bill was less than \$1.50.

"Oh, the *Grand Ole Opry*. That was great. Another thing that impressed me was during World War II, there were several families that lived around us that didn't have a radio. They couldn't afford a radio. But they came to our house every night and listened to ours. These people came and sat around until all the news was over and they bade my mother and father, 'Goodnight,' but they were back the next night. Just to hear the news. ... [The radio] started letting people know what was happening in other parts of the world.... It was amazing to turn that on and you could hear a man talking from New York or any other long distance."

### **Sam Oswalt, of the Troutman area**

*Age seventy-eight. Thinks his family got electricity in 1939.*

He doubts younger people can appreciate how much electricity has helped people. He remembers some neighbors being scared when it first came, and he remembers people talking about it "leaking out" of sockets. He remembers turning on the electric water pump that first day.

"We had put a pump in at the spring. It's a thousand and twenty feet to the home place and a hundred and one foot rise. And we didn't know what to set that pump on to pull the water out of the spring. So the electrician come out here with me. We went to the spring when they turned the power on and took a shotgun; left the shotgun up here at the house and told him when the water started running out of the spigot to shoot that gun and let us know how much pressure we had to have to run water up to the house. ... That was the first thing. Then lights. My goodness, it was wonderful. It was just like daylight, almost."

### **Hubert R. Prevatte, of Pembroke**

*Got power around 1943, when he would have been thirty-five years old.*

"When we got our refrigerator it was about three months, believe it or not, before we had our power. We bought a refrigerator from the Pace Supply Company. They sold it to us on a credit to pay for it that fall and we were going to our power, and did get our power, along in the spring of the year forty-three, either April, May, somewhere along there. And we had this refrigerator sitting in the kitchen ready when we got the power, and that's the only appliance we had for at least two or three years. Then our next appliance was an electric radio to replace our old battery radio. ... Oh, it was a big console, big cabinet set. Sat on the floor with legs. Looked very much like the older TVs."

Electricity meant more time to do farm chores, because the family had lights. It also meant not having to buy big blocks of ice to use for keeping food cold.

"I cannot overemphasize the benefits that electricity and the telephone have been to the rural area of our community and other communities. My mind goes back to many years when we didn't have either and how we had to communicate by foot mostly from one farm neighbor to another. We exchanged ideas about our farming; we got together as often as we had time for; encouraged the use of any knowledge that we had to the other. When we got electricity and when we got the telephone, it was just a dream come true to most people in the farming community—not just in our community but in many communities in the surrounding counties."